

CONTENTS

Proceedings of conference 'Oxidation and mechanical properties'

1	Editorial	157
2	Effects of oxygen on creep performance: mechanisms and predictive modelling S. Osgerby and B. F. Dyson	161
9	Influence of sulphidation and carburisation on creep V. Guttman	170
19	Role of oxides in fatigue crack propagation J. E. King and P. J. Cotterill	176
32	Plasticity of protective oxide scales M. Schütze	182
39	Effect of oxidation on integrity of bolted structures I. R. McLauchlin	187
45	<i>Poster Paper</i> Effects of interfacial stress on oxidation of mild steel S. B. Newcomb, P. L. Harrison, and A. Whittaker	192
53	<i>Poster Paper</i> Use of acoustic emission to identify oxide fracture modes D. J. Hall, S. Booth, and W. T. Evans	196
56	<i>Poster Paper</i> Interaction between oxidation and mechanical properties of 20Cr-25Ni-Nb stabilised stainless steel M. J. Bennett, A. C. Roberts, M. W. Spindler, and D. H. Wells	Pro pro
69	<i>Poster Paper</i> Mechanical properties of scales formed under combined erosion and corrosion A. J. Ninham, J. A. Little, and I. M. Hutchings	209
73	<i>Poster Paper</i> Creep rupture properties of oxidised 20%Cr austenitic steels R. C. Lobb and R. C. Ecob	211
81	<i>Poster Paper</i> Limits to adherence of oxide scales J. Robertson and M. I. Manning	221
93	<i>Poster Paper</i> Mechanisms of high temperature crack growth in nickel aluminide C. A. Hipsley and J. H. DeVan	230
96	<i>Poster Paper</i> Role of surface oxides in modifying solid particle impact damage D. J. Stephenson and J. R. Nicholls	237
100	<i>Poster Paper</i> Influence of laser melting treatment on surface composition of Fe-17Cr-13Ni single crystal alloy Part 1 Oxidation during laser treatment G. Moulin, J. M. Siffre, and P. Marcus	249
107	<i>Poster Paper</i> Influence of laser melting treatment on surface composition of Fe-17Cr-13Ni single crystal alloy Part 2 Surface segregation of nitrogen and sulphur G. Moulin and P. Marcus	263
121	Strengthening of grain boundaries by segregated interstitials in iron A. H. Cottrell	273
124	Precipitation-segregation mechanism for high temperature temper embrittlement of steels revealed by Auger electron spectroscopy and internal friction measurements T. C. Lei, J. Sun, C. H. Tang, and M. Lei	285
134	AuIn-Ge and AuIn ₂ -Ge sections of Au-Ge-In phase diagram M. T. Z. Butt and C. Bodsworth	293
137	Dielectric behaviour of hot pressed AlN ceramic exposed to organic acid vapours K. K. Srivastava and A. Kumar	301
141	Chin Liu strain rate sensitivity index-strain equation of superplasticity and influence of specimen geometry Chin Liu and Yi Shi-Gong	314
146	Structural order and magnetism of Co-P alloys produced by electrochemical deposition L. Lanotte, P. Matteazzi, and V. Tagliaferri	325
151	Investigation of microstructural changes occurring during warm working of manganese partitioned dual phase steel E. Navara, C.-H. Li, and D. J. Smith	331
		338
		349

CONTENTS

Proceedings of conference 'Oxidation and mechanical properties'

1	Editorial	157
2	Effects of oxygen on creep performance: mechanisms and predictive modelling S. Osgerby and B. F. Dyson	161
9	Influence of sulphidation and carburisation on creep V. Guttman	170
19	Role of oxides in fatigue crack propagation J. E. King and P. J. Cotterill	176
32	Plasticity of protective oxide scales M. Schütze	182
39	Effect of oxidation on integrity of bolted structures I. R. McLauchlin	187
45	<i>Poster Paper</i> Effects of interfacial stress on oxidation of mild steel S. B. Newcomb, P. L. Harrison, and A. Whittaker	192
53	<i>Poster Paper</i> Use of acoustic emission to identify oxide fracture modes D. J. Hall, S. Booth, and W. T. Evans	196
56	<i>Poster Paper</i> Interaction between oxidation and mechanical properties of 20Cr-25Ni-Nb stabilised stainless steel M. J. Bennett, A. C. Roberts, M. W. Spindler, and D. H. Wells	Pro pro
69	<i>Poster Paper</i> Mechanical properties of scales formed under combined erosion and corrosion A. J. Ninham, J. A. Little, and I. M. Hutchings	209
73	<i>Poster Paper</i> Creep rupture properties of oxidised 20%Cr austenitic steels R. C. Lobb and R. C. Ecob	211
81	<i>Poster Paper</i> Limits to adherence of oxide scales J. Robertson and M. I. Manning	221
93	<i>Poster Paper</i> Mechanisms of high temperature crack growth in nickel aluminide C. A. Hipsley and J. H. DeVan	230
96	<i>Poster Paper</i> Role of surface oxides in modifying solid particle impact damage D. J. Stephenson and J. R. Nicholls	237
100	<i>Poster Paper</i> Influence of laser melting treatment on surface composition of Fe-17Cr-13Ni single crystal alloy Part 1 Oxidation during laser treatment G. Moulin, J. M. Siffre, and P. Marcus	249
107	<i>Poster Paper</i> Influence of laser melting treatment on surface composition of Fe-17Cr-13Ni single crystal alloy Part 2 Surface segregation of nitrogen and sulphur G. Moulin and P. Marcus	263
121	Strengthening of grain boundaries by segregated interstitials in iron A. H. Cottrell	273
124	Precipitation-segregation mechanism for high temperature temper embrittlement of steels revealed by Auger electron spectroscopy and internal friction measurements T. C. Lei, J. Sun, C. H. Tang, and M. Lei	285
134	AuIn-Ge and AuIn ₂ -Ge sections of Au-Ge-In phase diagram M. T. Z. Butt and C. Bodsworth	293
137	Dielectric behaviour of hot pressed AlN ceramic exposed to organic acid vapours K. K. Srivastava and A. Kumar	301
141	Chin Liu strain rate sensitivity index-strain equation of superplasticity and influence of specimen geometry Chin Liu and Yi Shi-Gong	314
146	Structural order and magnetism of Co-P alloys produced by electrochemical deposition L. Lanotte, P. Matteazzi, and V. Tagliaferri	325
151	Investigation of microstructural changes occurring during warm working of manganese partitioned dual phase steel E. Navara, C.-H. Li, and D. J. Smith	331
		338
		349

- 157 **Effect of prior cold work on low temperature sensitisation susceptibility of austenitic stainless steel AISI 304**
B. K. Shah, A. K. Sinha, P. K. Rastogi, and P. G. Kulkarni
- 161 **Microstructure and properties of extruded Al-Li-Cr alloy prepared from atomised powder**
H. B. McShane, M. S. Mahmoud, and T. Sheppard
- 170 **Wetting of nickel alloys by nickel based brazes**
W. F. Gale and E. R. Wallach
- 176 **Influence of joint gap width on strength and fracture toughness of copper brazed steels**
F. P. L. Kavishe and T. J. Baker
- 182 **Dual phase vitreous enamels**
Part 3 Transmission electron microscopy of enamel/substrate interface
W. J. Nisbet, G. W. Lorimer, C. Sherhod, and M. J. Stowell
- 187 **TiAl-SiC composites prepared by high temperature synthesis**
J. C. Rawers, W. R. Wrzesinski, E. K. Roub, and R. R. Brown
- 192 **Relationship between price and consumption of metals**
S. Georgentalis, J. Nutting, and G. Phillips
- 196 **Short Communication** Physicomathematical description of quenching stage of steel sheets for continuous annealing
M. Tomellini

Proceedings of workshop 'Intermediate temperature embrittlement processes in duplex stainless steels'

- 209 **Editorial overview**
 - 211 **Aging kinetics of CF3 cast stainless steel in temperature range 300-400°C**
P. H. Pumphrey and K. N. Akhurst
 - 221 **Relationship between evolution of mechanical properties of various cast duplex stainless steels and metallurgical and aging parameters: outline of current EDF programmes**
S. Bonnet, J. Bourgoïn, J. Champredonde, D. Guttman, and M. Guttman
 - 230 **Effect of aging on fracture behaviour of cast stainless steel and weldments**
G. E. Hale and S. J. Garwood
 - 237 **Aging effects in welded cast CF3 stainless steel**
M. Strangwood and S. G. Druce
 - 249 **Embrittlement of laboratory and reactor aged CF3, CF8, and CF8M duplex stainless steels**
H. M. Chung and T. R. Leax
 - 263 **Thermodynamics of duplex stainless steels**
F. H. Hayes, M. G. Hetherington, and R. D. Longbottom
 - 273 **Kinetics of phase decomposition processes: numerical solutions to Cahn-Hilliard equation**
M. I. M. Copetti and C. M. Elliott
 - 285 **APFIM and AEM investigation of CF8 and CF8M primary coolant pipe steels**
M. K. Miller and J. Bentley
 - 293 **Quantitative atom probe analysis of spinodal reaction in ferrite phase of duplex stainless steel**
J. E. Brown, A. Cerezo, T. J. Godfrey, M. G. Hetherington, and G. D. W. Smith
 - 301 **Atom probe and transmission electron microscopy study of aging of cast duplex stainless steels**
P. Auger, F. Danoix, A. Menand, S. Bonnet, J. Bourgoïn, and M. Guttman
 - 314 **Microscopical evaluation of low temperature aging of type 308 stainless steel weldments**
K. B. Alexander, M. K. Miller, D. J. Alexander, and R. K. Nanstad
-
- 325 **Strength of grain boundaries in impure metals**
A. H. Cottrell
 - 331 **Static strain aging in high carbon steel wire**
I. P. Kemp, G. Pollard, and A. N. Bramley
 - 338 **Effects of precipitates on strength and toughness of vanadium structural steels**
M. M. A. Bepari
 - 349 **Effect of microstructure on fracture toughness J_{Ic} of heat treated 0.4C-Cr-Mo-Ni structural low alloy steel**
Y. Tomita

- 357 Investigation of structure dependence of diffusivity, solubility, and permeability of hydrogen in hot rolled low carbon steels
K. S. Forcey, I. Iordanova, and D. K. Ross
- 364 Corrosion resistance of high temperature alloys in gas containing hydrogen chloride
F. H. Stott, R. Prescott, and P. Elliott
- 371 Effect of high cutting speed on surface integrity of AISI 4340 steel during turning
A. B. Sadat
- 376 Fluid flow modelling of gas stirred ladles with immersion hood
J. D. Hwang, Y. C. Lin, and W. S. Hwang
- 383 Tensile properties of heat affected zone of medium strength low carbon, C-Mn, and 2.25Cr-1Mo steels
O. M. Akselsen and G. Rørvik
- 390 Process parameter determination for consumable nozzle electroslag welding
T. Shinoda and I. Masumoto
- 395 *Short Communication* Laser cutting of glass ceramic matrix composite
J. A. Ridealgh, R. D. Rawlings, and D. R. F. West
- 405 Experimental evaluation of particle coarsening theories
C. S. Jayanth and P. Nash
- 415 Effect of austenitising temperature on tensile properties of Cu-Ni austempered ductile iron
M. Grech and J. M. Young
- 422 Cleavage to quasicleavage fracture transition in steels
F. P. L. Kavishe
- 428 Structure, anisotropy, and properties of hot rolled AA 5083 alloy
H. B. McShane, C. P. Lee, and T. Sheppard
- 441 Effect of hydrogen charging on fracture behaviour of 304L stainless steel
D. Hardie and J. J. F. Butler
- 447 Dynamic fracture of binary Al-Li alloy in torsion
B. Dodd and H. Kobayashi
- 453 Changes of flow stress and microstructure during hot deformation of Al-1Mg-1Mn
F. R. Castro-Fernandez, C. M. Sellars, and J. A. Whiteman
- 461 Development of microstructure in AA 8090 alloy produced by extrusion processing
A. K. Mukhopadhyay, H. M. Flower, and T. Sheppard
- 469 Effect of additions of Mn, Ce, Nd, and Si on rate of dissolution of splat quenched Mg-Al and Mg-Zn alloys in 3%NaCl solution
D. S. Ahmed, R. G. J. Edyvean, C. M. Sellars, and H. Jones
- 475 Localised corrosion behaviour of 17-4 PH stainless steel
U. Kamachi Mudali, A. K. Bhaduri, and J. B. Gnanamoorthy
- 482 Solidification in castings by finite element method
R. W. Lewis, H. C. Huang, A. S. Usmani, and M. R. Tadayon
- 497 Oxidation of silicon nitride sintered with ceria and alumina
J. Echeberria and F. Castro
- 504 Creep of Pb-2.5Sb-0.2Sn alloy at low stresses
R. S. Mishra, H. Jones, and G. W. Greenwood
- 510 Testing models for superplastic bulge forming of domes
Z. X. Guo and N. Ridley
- 516 Effect of stress state on cavitation and hole growth in superplastic AA 7475 aluminium alloy
Z. X. Guo and N. Ridley
- 520 Deformation banding and texture in hot rolled Al-1.0Mn-1.2Mg alloy
P. Bate and A. Oscarsson
- 528 Microstructural characteristics of three RS aluminium alloys: Al-4Cr-1Fe, Al-6.43Cr-1.67Zr, and Al-5Cr-2Zr
E. K. Ioannidis and T. Sheppard
- 535 Processing and properties of high temperature application Al-Fe-Mo based alloys prepared from rapidly solidified powder
A. J. S. Chowdhury and T. Sheppard
- 543 Finite element simulation of solidification of aluminium casting alloy LM 25
S. G. R. Brown and J. A. Spittle

- 548 **Infiltration mechanics in conventional and hybridised fibre reinforced metal-matrix composites**
R. M. K. Young
- 554 **Effect of silicon on microstructures and some mechanical properties of low carbon steels**
C. C. Anya and T. N. Baker
- 562 **High temperature intergranular crack growth under cyclic loading in martensitic 2.25Cr-1Mo steel**
P. Bowen, C. A. Hippsley, and J. F. Knott
- 575 **Residual stresses in chains: Comparison of neutron diffraction and finite element results**
E. Abolfathi, P. J. Webster, G. M. Swallowe, G. F. Modlen, J. Ascough, and K. S. Low
- 585 **Intercept length distributions for several polygons**
F. C. Hull
- 592 **Model for transition from upper to lower bainite**
M. Takahashi and H. K. D. H. Bhadeshia
- 604 **Effect of grain size on crack propagation of high strength steel in gaseous hydrogen atmosphere**
M. Nakamura and E. Furubayashi
- 611 **Development of mechanical properties in AA 8090 alloy produced by extrusion processing**
A. K. Mukhopadhyay, H. M. Flower, and T. Sheppard
- 621 **Effect of interfacial oxide layer in Al-SiC particle composites on bond strength and mechanical behaviour**
H. Ribes, R. Da Silva, M. Suéry, and T. Bretheau
- 629 **Fabrication and properties of rapidly solidified magnesium and Mg-Si alloys**
N. Raghunathan and T. Sheppard
- 641 **Influence of welding conditions and residual stresses on strength of Al_2O_3/Ti diffusion welds**
H. Kato, M. Imai, and K. Yoshikawa
- 646 **Inhibiting effect of palladium additions on embrittlement of Fe-Ni low expansion alloys by copper containing brazing alloys**
E. R. Perry and J. E. Castle
- 656 **Effects of process variables on cycle time during resin transfer moulding for high volume manufacture**
C. D. Rudd, M. J. Owen, and V. Middleton
- 666 **Microporous calcium silicate thermal insulator**
Qijun Zheng and D. D. L. Chung
- 681 **Overview Surface effects in batch galvanising of silicon containing steels**
M. S. Kozdras and P. Niessen
- 687 **Thermodynamic evaluation of Nb-C system**
Weiming Huang
- 695 **Decomposition of Zn-Al alloys on quench-aging**
T. Savaşkan and S. Murphy
- 705 **Effects of microstructure on superplastic behaviour of nickel based superalloy NK17CDAT**
Y. Combres and Ch. Levaillant
- 714 **Microstructural evolution in bainite, martensite, and δ ferrite of low activation Cr-2W ferritic steels**
F. Abe, H. Araki, and T. Noda
- 724 **Analysis of hardenability effect of boron**
Hong-Rong Lin and Gwo-Hwa Cheng
- 731 **Fatigue dislocation structure and crack initiation in low carbon alloy steel**
Liu Yumen
- 735 **Hydrogen embrittlement, thermal aging, and role of carbides in fatigue of high strength steel**
C. A. Hippsley and C. E. Lane
- 743 **Effect of calcium treatment on hot workability of Cr-Ni-0.7N stainless steel**
K. Mineura and K. Tanaka
- 749 **Influence of powder metallurgical processing on production and properties of rapidly solidified Al-5Cr-2Zr, Al-6.43Cr-1.67Zr, and Al-4Cr-1Fe extrudates**
E. K. Ioannidis and T. Sheppard
- 755 **Formation of die lines during extrusion of AA 6063**
M. P. Clode and T. Sheppard
- 764 **Effect of long term aging on mechanical properties and microstructure of nickel base weld**
Ping Liu and J.-O. Nilsson
- 772 **Electrode melting and plate melting efficiencies of submerged arc welding and gas metal arc welding processes**
R. S. Chandel

- 778 *Short Communication* Crystal structure of compounds $\text{Fe}_{17}\text{Gd}_2$ and $\text{Fe}_{17}\text{Tb}_2$
S. Atiq, R. D. Rawlings, and D. R. F. West
- 781 *Short Communication* Nucleation of Widmanstätten ferrite
A. Ali and H. K. D. H. Bhadeshia
- 793 *Overview* Surface cracking mechanism of continuously cast low carbon low alloy steel slabs
Y. Machara, K. Yasumoto, H. Tomono, T. Nagamichi, and Y. Ohmori
- 807 Unified theory of effects of segregated interstitials on grain boundary cohesion
A. H. Cottrell
- 811 Mechanism of grain growth in metals
H. Fredriksson
- 819 Recrystallised grain size of commercial purity aluminium after hot torsion within steady state regime
I. Gutierrez, F. Castro, J. J. Urcola, and M. Fuentes
- 829 Precipitation hardening owing to δ' Al_3Li in low activation Al-3Li-12Si-3Mg alloy
F. Abe, H. Araki, T. Noda, and K. Kamada
- 838 Carbide precipitation in low carbon niobium steel containing manganese and chromium
P. R. Rios and R. W. K. Honeycombe
- 843 Improved low temperature mechanical properties of 0.4C-Cr-Mo-Ni steel through modified heat treatments
Y. Tomita
- 850 Mechanism of anisotropy in fracture behaviour and fracture toughness of high strength aluminium alloy plate
H. X. Li and C. Q. Chen
- 857 Influence of microstructure of fibre/matrix interface on mechanical properties of Al/SiC composites
B. R. Henriksen and T. E. Johnsen
- 863 Oxidation and hardness of compounds formed across composite divide
H. E. N. Stone
- 867 Aluminium nitride precipitation and grain structure of continuously cast billet corners
K. D. Walker and R. I. Marshall
- 872 Deformation behaviour during drawing of copper rods produced using various processes
E. S. Kayali, M. El-Sayed, and P. Funke
- 885 Surface segregations on Invar alloy
L. Ben Mostefa, D. Roptin, and G. Saindrenan
- 892 Effect of small alloying additions on behaviour of rapidly solidified Cu-Cr alloys
E. Batawi, D. G. Morris, and M. A. Morris
- 900 Laser surface melting of AISI 4340 steel
M. Fastow, M. Bamberger, N. Nir, and M. Landkof
- 905 Formation of spheroidal carbide in vanadium white cast iron by rare earth modification
Wang Chao Chang, Hsu Heng Tsun, and Ma Qian

Proceedings of 'Birmingham meeting to mark the 70th birthday of Sir Alan Cottrell'

- 917 Editorial
- 921 Photographs of the proceedings
- 924 Sir Alan Cottrell: an appreciation
T. Broom
- 927 Materials education in the 1990s: ways and means
R. E. Smallman
- 930 Materials science education in the USA and the UK: the industrial influence
R. J. Stokes
- 934 Materials research at The University of Birmingham
M. H. Loretto
- 937 The University of Birmingham, nuclear power, and start of UK reactor programme
J. E. Harris
- 940 Physical metallurgy of Magnox fuel element
J. E. Harris

- 947 **The moderator's moderator**
G. K. Williamson
- 950 **Inert gas bubbles**
P. J. Goodhew
- 953 **Chemical processing of nanophase WC-Co composite powders**
L. E. McCandlish, B. H. Kear, and B. K. Kim
- 958 **New materials for aerospace industry**
A. R. C. Westwood
- 962 **Hard magnets**
I. R. Harris
- 967 **Advances in microscopy of materials**
L. M. Brown
- 974 **Metallurgical applications of modern electron theory of alloys**
A. H. Cottrell
- 976 **List of attendees**
-
- 981 **Overview** Lyotropic liquid crystal polymers for engineering applications
A. A. Collyer
- 993 **Fracture toughness of high speed steels**
L. W. Crane and A. P. Bigg
- 999 **Surface electron beam melting and alloying of tool steels**
Q. F. Peng, Z. Shi, A. Bloyce, and T. Bell
- 1005 **Transition from bainite to acicular ferrite in reheated Fe-Cr-C weld deposits**
S. S. Babu and H. K. D. H. Bhadeshia
- 1021 **Wetting and spreading of Ni-P brazes: effects of workpiece and braze composition**
J. C. Ambrose, M. G. Nicholas, N. Young, and S. L. Jenkins

Keynotes of conference 'Microstructure and mechanical processing'

- 1037 **Editorial**
- 1039 **Cold deformation microstructures**
N. Hansen
- 1048 **Correlation of deformation texture and microstructure**
J. R. Hirsch
- 1058 **Texture development in high strength aluminium alloys**
A. W. Bowen
- 1072 **Modelling microstructural development during hot rolling**
C. M. Sellars
- 1082 **Microstructural development in relation to hot working of titanium alloys**
H. M. Flower
- 1093 **Modelling recrystallisation**
T. Furu, K. Marthinsen, and E. Nes
- 1103 **Control of annealing texture and earing in non-hardenable aluminium alloys**
W. B. Hutchinson and H.-E. Ekström
- 1113 **Effects of particles on development of microstructure and texture during rolling and recrystallisation in fcc alloys**
K. Lücke and O. Engler
- 1131 **Deformation and recrystallisation of steels**
T. Gladman
- 1139 **Grain growth**
B. Ralph
- 1145 **Superplastic microstructures**
N. Ridley
- 1157 **Microstructural development during thermomechanical processing of particulate metal-matrix composites**
F. J. Humphreys, W. S. Miller, and M. R. Djazeb
-

- 1173 **Fe-Al-Zn ternary phase diagram at 450°C**
Z. W. Chen, R. M. Sharp, and J. T. Gregory
- 1177 **Interdiffusion measurement of niobium and tantalum in iron base alloys**
Q. A. Shaikh
- 1181 **Temper embrittlement of hot work die steel**
B. Ule, F. Vodopivec, M. Pristavec, and F. Grešovnik
- 1187 **Parametric representation of fatigue in alloys and its relation to microstructure**
T. E. Chung and R. G. Faulkner
- 1193 **Effect of niobium on creep and creep crack growth of cast Ni-Cr austenitic steel**
S. J. Zhu, D. J. Li, Y. Wang, W. Q. Tian, S. G. Xu, and F. G. Wang
- 1199 **Plane strain fracture toughness test procedures for particulate metal matrix composites**
B. Roebuck and J. D. Lord
- 1210 **Fire resistant high strength low alloy steels**
M. Assefpour-Dezfuly, B. A. Hugaas, and A. Brownrigg
- 1215 **Effect of post-weld heat treatment on heat affected zone microstructures of microalloyed C-Mn submerged arc welds**
D. J. Sparkes, N. Bailey, and T. G. Gooch
- 1227 **Short Communication** Precipitation and age hardening behaviour of Al-0.2Ti-0.2Be alloy
W. V. Youdelis, W. Fang, and T. D. Lowes
- 1231 **Simulation of mesotexture between deformed and recrystallised microstructures**
V. Randle
- 1236 **Directional recrystallisation in Inconel MA 6000 nickel base oxide dispersion strengthened superalloy**
M. M. Baloch and H. K. D. H. Bhadeshia
- 1247 **Influence of transformation induced recrystallisation on hot rolling textures of low carbon steel sheet**
D. Vanderschueren, L. Kestens, P. Van Houtte, E. Aernoudt, J. Dilewijns, and U. Meers
- 1251 **Dislocation substructures developed during dynamic recrystallisation in polycrystalline nickel**
T. Sakai and M. Ohashi
- 1258 **Amorphisation and phase transformations in mechanically alloyed Ti-Al powders: electron microscopy investigation**
E. Bonetti, G. Cocco, S. Enzo, and G. Valdrè

Book reviews/notices

pages 113, 201, 321, 399, 491, 579, 673, 787, 911, 1032, 1167, 1263

Translations (MITS lists)

pages 115, 203, 322, 401, 493, 581, 675, 789, 913, 1033, 1169, 1265

Conference diary

pages 119, 207, 323, 403, 495, 583, 679, 791, 915, 1035, 1171, 1267

The Institute of Metals Awards

page 671

